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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
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ART UNIT	PAPER NUMBER
1627	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,736	LULLA ET AL.	
	Examiner	Art Unit	
	SAMIRA JEAN-LOUIS	1627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 November 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 15-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 15-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continuation Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/04/09 has been entered.

Response to Arguments

This Office Action is in response to the amendment submitted on 11/04/09. Claims 1-9 and 15-26 are currently pending in the application, with claims 10-14 and 27-33 having being cancelled. Accordingly, claims 1-9 and 15-26 are being examined on the merits herein.

Receipt of the aforementioned amended claims and 1.132 Affidavit is acknowledged and has been entered.

Applicant's argument with respect to the 1.132 Declaration/Affidavit has been fully considered but is not found persuasive. Applicant argues that as compared to single or double combinations, the claimed triple active agent combinations exhibit unexpected superior stability. Such arguments are not persuasive as the Examiner maintains that such results are not unexpected as Meade clearly teaches the triple

combination of betamimetics such as salmeterol, anticholinergics such as tiotropium, and corticosteroids such as fluticasone for the treatment of COPD. Additionally, Meade teaches that the active substances have a preferred average particle size of 0.5 to 10 μm and most preferably particle sizes of 1μm-5μm. As a result, the Examiner maintains that because Meade teaches a triple combination and given that Meade teaches that the active substances of the triple combination are most preferably in a range from 1μm-5μm, the Examiner maintains that the low agglomeration exhibited by such particles over time demonstrated by applicant would necessarily come about in the particles of Meade. Consequently, the Examiner contends that the unexpected results purported by applicant are neither unobvious nor unexpected.

1. Applicant's contention that Meade does not explicitly disclosed a pharmaceutical product comprising any of the claimed combination wherein the active substances have a particle size range of from nano-size up to about 12 μm has been fully considered. Applicant further argues that Meade does not disclosed particular recited combinations in the particularly recited particle sizes and thus is not anticipated by Meade. Such arguments are not persuasive as applicant is arguing features not previously presented. It is noted that the features upon which applicant relies (i.e., wherein particles of formulations x-xiii contain approximately 95% of the active particles have a particle size of below 2.5 μm, and the remaining particles have a particle size between 2.5 and 5 μm) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See

In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). However, given that applicant has amended the claims, such rejection is now moot. Consequently, the rejection of claims 1-9 and 15-26 is hereby withdrawn.

2. Applicant's argument that Keller is concerned with poor moisture problems rather than problems with improved treatments for inflammatory or respiratory diseases has been fully considered but is not found persuasive. The Examiner however reminds applicant that the claims are directed to a composition and not to a method of treatment. Thus, if the prior art composition contains the exact same components as applicant; the Examiner contends that such components would necessarily be capable of achieving the same function as that of applicant, i.e. treatment of respiratory diseases in this case. As for applicant's arguments that Keller does not teach any particular combination of active ingredients, the Examiner disagrees since Keller teaches the use of magnesium stearate in dry powder formulations which contain the preferred combination of a beta-mimetic and/or an anti-cholinergic and/or a corticosteroid (see col. 5, lines 52-54). Examples of active substances include a finite number of beta-mimetics such as salmeterol or salts thereof, examples of anti-cholinergics include a finite number of active substances such as tiotropium or tiotropium bromides, and example of corticosteroids include a finite number of active substances such as fluticasone or fluticasone propionate (see col. 3, lines 58-67). Moreover, Keller et al. teach that the active substance particles possess a mean particle diameter at most of 5 µm. As a result, the Examiner contends that Keller did indeed render obvious applicant's

invention as previously claimed. While applicant amended the composition to now recite the particle sizes of 95% particles of less than 2.5 μm and the remaining particles having a size between 2 μm to 5 μm, the Examiner maintains that the claims are still rendered obvious as Keller recited that the active substances (i.e. 100% of the triple combination and this approximately 95% of the active substances) are at most 5 μm. As a result, the Examiner contends that in light of the fact that Keller teaches the exact same components as applicant's and overlapping particle size, the Examiner maintains that Keller still render obvious applicant's invention.

3. As for applicant's arguments that Keller is directed to a general application and not to the treatment of respiratory diseases, such arguments are not persuasive as the claims are directed to a composition. If the prior art discloses the same composition, the properties associated with the composition would necessarily be present regardless if Keller explicitly teaches such methods for his composition. As for applicant's arguments that Keller's composition is non-enabled, the Examiner disagrees since one of ordinary skill in the art will readily be able to make and use the invention of Keller. Moreover, Keller teaches that his invention can be utilized to lower the sensitivity of powder mixtures to moisture (see col. 4, lines 16-20) and further demonstrated low moisture properties; as a result, the Examiner contends that Keller is indeed enabled. The Examiner again reiterates that because Keller teaches similar compositions to applicant, Keller does indeed render obvious applicant's invention. If however applicant believes otherwise, it is incumbent upon applicant to demonstrate via comparative data that the composition of Keller does not result in a pharmaceutical product that can be

used for the treatment of respiratory diseases. As for applicant's arguments that Keller's composition cannot be made as an aerosol formulation, the Examiner again disagrees as aerosol formulations are well known in the art and formulating the aforementioned composition as an aerosol composition is well within the purview of the skilled artisan. As for applicant's request to reconsider the publication by Fardon et al., such request is unclear as applicant has yet to provide any document demonstrating unexpected results other than 1.132 declaration. Consequently, such request is therefore denied. While applicant argues differences between single, double and triple combination formulations wherein triple drug combinations provide low agglomeration, dose content uniformity and stability, the Examiner continues to maintain that given that Keller teach the exact same compositions with overlapping particle sizes, the claims are therefore obvious as Keller's compositions are expected to possess similar properties. As a result, the Examiner contends that Keller does indeed render obvious applicant's invention.

4. Applicant's arguments regarding the Obviousness Double Patenting rejection has been fully considered. Applicant further argues that Lulla '902 does not teach addition of corticosteroids. Such arguments are not persuasive as Lulla '902 teaches a composition comprising salmeterol and tiotropium. While Lulla '902 does not teach addition of corticosteroids, Meade teaches the combination of salmeterol and tiotropium in combination with a corticosteroid such as fluticasone for the treatment of COPD. As a result, the Examiner maintains that one of ordinary skill in the art would have found it obvious to add fluticasone to the composition of Lulla '902 if the desire is to formulate a

composition for the treatment of COPD. As a result, the Examiner continues to maintain that the instant claims are rendered obvious over Lulla '902 in view of Meade.

For the foregoing reasons, the 102 (e) rejection is withdrawn while the ODP and 103(a) rejections of record were indeed proper. However, in view of applicant's amendment, the following modified ODP and 103 (a) Non-Final rejections are being made.

Provisional Non-Statutory Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In *re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4, 8, 15-18, 20-22, and 24-25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 5-7, 9-10, and 12-13 of copending Application No. 11/574902 (hereinafter Lulla US Patent Application No. '902) in view of Meade et al. (U.S. 2003/0018019 A1, previously cited). Although the conflicting claims are not completely identical, they are not patentably distinct from each other because both applications are directed to a formulation comprising beta-mimetics such as salmeterol and anti-cholinergics such as tiotropium administered via inhalation or metered dose inhaler for the treatment of COPD.

While the co-pending application Lulla '902 does not teach addition of corticosteroids or specific particle sizes, Meade et al. teach the combination of beta-mimetics such as salmeterol and anticholinergics such as tiotropium in combination with corticosteroids such as fluticasone for the treatment of COPD and that particles can be in a size between 1 and 5 μm, a range that overlaps applicant's particle size.

Consequently, one of ordinary skill would have found it obvious to add corticosteroids to the composition of Lulla '902 since Meade et al. teach their effective combination in the treatment of COPD. Thus, the aforementioned claims of the instant application are substantially overlapping in scope as discussed hereinabove and are prima facie obvious over the cited claims of corresponding application No. 11574902.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9 and 15-26 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Meade et al. (2003/0018019 A1, previously cited) in view of Foulds et al. (Pharmaceutisch Weekblad Scientific Edition, 1983, Vol. 5, pgs. 74-76).

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

It is respectfully pointed out that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the limitation of the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCPA 1963). Thus, the intended use for the treatment of conditions is not afforded patentable weight.

Meade et al. teach novel pharmaceutical compositions based on anticholinergics, corticosteroids, and beta-mimetics (see abstract and pg. 1, paragraph 0001). Within the scope of the invention the term anticholinergics 1 denotes salts which are preferably selected from among tiotropium and most preferably tiotropium salts (see pg. 1, paragraph 0004). By salts, the present invention encompasses salts of tiotropium including the bromide salt wherein tiotropium bromide is particularly preferred (instant claims 1-2; see pg. 1, paragraphs 0004-0005). Within the scope of the invention, the

word corticosteroids (hereinafter 2) denotes compounds selected from a group which includes fluticasone wherein the most preferred compounds including fluticasone (instant claim 1 and 3; see pg. 1, paragraphs 0006). Any reference to salts of corticosteroids includes sodium salts, propionate salts, etc... (instant claim 2; see pg. 1, paragraph 0007). Examples of beta-mimetics (i.e. 3) which may be used in the present invention include preferred compound salmeterol or its salts including sulfate salts (instant claims 1; see pgs. 1-2, paragraphs 0008-0012). Meade et al. also teach that the three active substances are administered simultaneously in a single active substance formulation or administered successively in separate formulations (instant claim 1-4, 15-16, 20-21, and 24-25; see pg. 1, paragraph 0003). Additionally, Meade et al. teach that beta-mimetics 3 are optionally referred to as beta2-receptor agonists or ß2-agonists (see pg. 2, paragraph 0013). The pharmaceutical combination of 1, 2, and 3 (i.e. salmeterol, tiotropium and fluticasone; applicant's elected species; instant claims 1-4; pg. 3, paragraphs 0023-0025) are preferably administered by inhalation (instant claim 8) and provided in the form of their enantiomers, mixtures of enantiomers or in the form of racemates, in the form of suitable inhalable powders (instant claims 18 and 22), or inhalation aerosols (instant claim 9; or as a solution-instant claim 23; see pg. 2, paragraphs 0014 and 0020-0022). Additionally, the present invention is administered in a therapeutic effective quantity and administered along with a pharmaceutically acceptable carrier (instant claim 3; see pg. 2, paragraph 0017-0018). The composition can be provided as inhalable powders (instant claim 18) and provided in admixture with excipients such as lactose (instant claims 3 and 19; pg. 5, paragraphs 0032-0035).

Moreover, Meade et al. teach that the inhalable powders can be administered by means of metered dose inhalers (instant claim 17; see pg. 6, paragraph 0046 and pg. 7, paragraph 0055), using propellant free inhalable solutions or suspensions of the aforementioned combination (instant claim 23; see pg. 6, paragraphs 0047-0048 and pg. 9, paragraph 0088) or in nebulisers (instant claim 26; see pg. 7, paragraph 0056). Importantly, Meade et al. exemplify the inhalable powder containing tiotropium bromide in an amount of 0.0045% (i.e. anticholinergic %; instant claim 5), fluticasone propionate in an amount of 0.025% (i.e. corticosteroid; instant claim 7), and salmeterol xinafoate in an amount of 0.01% (i.e. B2-agonist; instant claim 6; see pg. 10, paragraphs 0097-0098). Moreover, Meade et al. teach that the micronized active substances 1, 2, and 3 (i.e. 100% of the anticholinergics, corticosteroids, and beta-mimetics) are preferably with an average particle size of 0.5 to 10 μm or most preferably from 1 to 5 μm (instant claims 1 and 3; see pg. 6, paragraphs 0036 and 0045).

Meade et al. do not explicitly teach that applicant's elected species (i.e. combination xii) is a composition wherein approximately 95% of the active particles have a particle size of below 2.5 μm and the remaining particles have a particle size of between 2.5 and 5 μm.

Foulds et al. teach testing of various nebulizers and distribution of drug particles to the lungs (see abstract). Foulds et al. tested 3 nebulizers and found that the Pulmosonic nebulizer was more effective in delivering the drug to the lungs and faster

than the other tested devices (see pg. 75, Discussion Section). Importantly, Foulds et al. teach that the explanation for the differences in performance may be due to particle size (see pg. 76, left col.). Specifically, Foulds et al. demonstrated that the Pulmosonic nebulizer contained close to 71% of particles had a particle size less than 4.1 µm thus motivating one of ordinary skill in the art to formulate the composition with drug particles that are smaller in size.

Moreover, the Examiner contends that because Meade et al. are silent on the percentage of particles that are between 1 to 5 µm, it is assumed that 100% (i.e. approximately 95%) of the particles would fall between 1 and 5 µm, a range that overlaps applicant's invention. Thus, to one of ordinary skill in the art would have found it obvious to formulate the composition using small particle size since Foulds et al. teach that such requirement is necessary for deposition in the respiratory tract.

Thus, to one of ordinary skill in the art at the time of the invention would have found it obvious to utilize the composition of Meade as a triple combination since Meade et al. teach the use of salmeterol, fluticasone, and tiotropium for the treatment of COPD. Moreover, one of ordinary skill would have found it obvious to formulate the particles in small particle sizes of 1 to 5 µm since Foulds et al. demonstrated that small particle size was more efficient in delivering the active substances to the respiratory tract.
Thus, given the teachings of Meade and Foulds, one of ordinary skill would have been motivated to combine the beta-mimetic agent salmeterol with the anti-cholinergic

tiotropium in combination with the corticosteroid fluticasone as taught by Meade et al. with the reasonable expectation of providing a formulation that is effective in treating COPD.

Claims 1-9, 15-22, and 24-26 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Keller et al. (U.S. 6,645,466 B1, previously cited) in view of Foulds et al. (Pharmaceutisch Weekblad Scientific Edition, 1983, Vol. 5, pgs. 74-76).

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

It is respectfully pointed out that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the limitation

of the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCPA 1963). Thus, the intended use for the treatment of conditions is not afforded patentable weight.

Keller et al. teach enhanced dry powder formulations for inhalation which contain an ineffective pharmaceutical carrier and a finely divided pharmaceutically active compound of inhalable particle size, i.e. having a mean particle diameter of preferably at most 10 µm and in particular at most 5 µm (instant claims 1, 3, 8 and 22; see abstract, col. 4, lines 55-67, and col. 9, lines 8-14). According to Keller, the active compounds in the formulation can be various compounds that can be administered by inhalation including a beta-mimetic such as salmeterol, an anti-cholinergic agent such as tiotropium, and a corticosteroid such as fluticasone, or a pharmaceutically acceptable derivative or salt thereof wherein the formulations can contain two or more of the aforementioned active compounds (instant claims 1, 3, 15, 20-21, and 24; see col. 6, lines 1-3 and 13-37). Additionally, Keller et al. teach the use of carriers such as lactose in multi-dose dry powder inhalers for improved flow properties and lubricating properties (see col. 3, lines 47-67). Salts or esters of the pharmaceutical compounds can be provided in the form a of salt including bromide, sulfate, propionate, etc...(instant claims 2, 4, 16, and 25; see col. 6, lines 40-50). Additionally, Keller et al. teach the use of magnesium stearate if the formulation contains a beta-mimetic such as salmeterol, and an anti-cholinergic such as tiotropium bromide, and a corticosteroid such as fluticasone bromide (see col., lines 52-66). Additionally, the active compound can range

approximately from 0.1%-10% by weight (instant claims 5-7; see col. 7, lines 11-22). All customary carriers used in dry powder inhalation can be used including mono and di-saccharides such as lactose (see col. 8, lines 1-4) and administered in a multi dose dry powder inhaler (col. 9, lines 21-27).

Keller et al. do not exemplify a formulation containing a beta-mimetic, an anti-cholinergic, and a corticosteroid. Similarly, Keller et al. do not teach the composition as an aerosol, in a nebuliser or a metered-dose inhaler. Moreover, Keller et al. do not specifically teach that applicant's elected species (i.e. combination xii) is a composition wherein approximately 95% of the active particles have a particle size of below 2.5 μm and the remaining particles have a particle size of between 2.5 and 5 μm.

Keller et al., however do teach that the formulations can contain two or more pharmaceutically active compounds (see col. 6, lines 13-37). Keller et al. further teach the use of magnesium stearate in dry powder formulations which contain a beta-mimetic, and/or an anti-cholinergic, and/or a corticosteroid or formulations in the form of the compounds' pharmaceutical salts such as salmeterol xinafoate, tiotropium bromide, and fluticasone propionate (applicant's elected species; see col. 6, lines 57-65).

Foulds et al. teach testing of various nebulizers and distribution of drug particles to the lungs (see abstract). Foulds et al. tested 3 nebulizers and found that the Pulmosonic nebulizer was more effective in delivering the drug to the lungs and faster

than the other tested devices (see pg. 75, Discussion Section). Importantly, Foulds et al. teach that the explanation for the differences in performance may be due to particle size (see pg. 76, left col.). Specifically, Foulds et al. demonstrated that the Pulmosonic nebulizer contained close to 71% of particles had a particle size less than 4.1 μm thus motivating one of ordinary skill in the art to formulate the composition with drug particles that are smaller in size.

Moreover, the Examiner contends that because Keller et al. are silent on the percentage of particles that are at most 5 μm, it is assumed that 100% (i.e. approximately 95%) of the particles would fall in a range wherein the particle sizes are at most 5 μm, a range that overlaps applicant's invention. Thus, to one of ordinary skill in the art would have found it obvious to formulate the composition using small particle size since Foulds et al. teach that such requirement is necessary for deposition in the respiratory tract.

Thus, to one of ordinary skill in the art at the time of the invention would have found it obvious to combine the active compounds disclosed by Keller et al. into a formulation since Keller et al. teach their use in dry powder formulations. Likewise, one of ordinary skill in the art at the time of the invention was made would have found it obvious to formulate the composition as an aerosol, in a nebuliser or a metered dose inhaler for proper delivery of the composition and given that it is well known in the art to formulate dry powder formulations as aerosols, in nebulizers or in metered dose

inhalers. Moreover, one of ordinary skill would have found it obvious to substitute fluticasone for its salts (i.e. fluticasone propionate) given that the substitution of one known element for another would have yielded predictable results. Additionally, one of ordinary skill in the art would have found it obvious to formulate the composition with drug particle sizes lower than 5 μm since Foulds demonstrated that drug particles of smaller sizes are more effective at depositing in the respiratory tract. Thus, given the teachings of Keller et al., one of ordinary skill would have been motivated to combine the beta-mimetic agent disclosed by Keller et al. with the anti-cholinergic agent, along with the corticosteroid and formulate the preparation in different forms since Keller et al. teach their use in dry powder inhalers for improved moisture resistance with the reasonable expectation of providing a formulation that is effective in moisture resistance.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samira Jean-Louis whose telephone number is 571-270-3503. The examiner can normally be reached on 7:30-6 PM EST M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. J. L. /

Examiner, Art Unit 1627

01/14/2010

/SREENI PADMANABHAN/

Supervisory Patent Examiner, Art Unit 1627